

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
30 June 2005 (30.06.2005)

PCT

(10) International Publication Number
WO 2005/058763 A1

(51) International Patent Classification⁷: C02F 1/74,
B01F 3/04

(21) International Application Number:
PCT/SE2004/001882

(22) International Filing Date:
16 December 2004 (16.12.2004)

(25) Filing Language: Swedish

(26) Publication Language: English

(30) Priority Data:
0303432-9 19 December 2003 (19.12.2003) SE

(71) Applicant and

(72) Inventor: ANDERSSON, Kurt [SE/SE]; Trumlevägen 1,
S-270 21 Glemmingebro (SE).

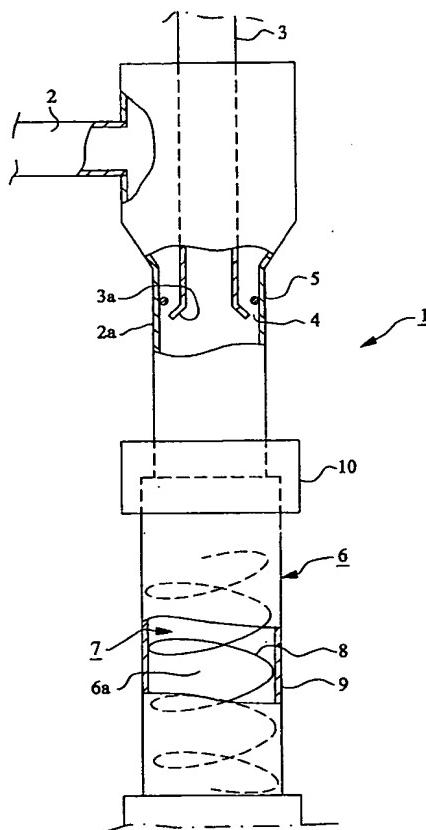
(74) Agents: WAGNER, Heinz et al.; H. Wagner & Co. AB,
Norra Vallgatan 72, S-211 22 Malmö (SE).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: MIXING DEVICE FOR MIXING AIR AND WATER IN A WATER PURIFIER



(57) **Abstract:** The present invention relates to a mixing device for mixing air and water in a water purifier. The mixing device comprises a water inlet pipe (2) and an air inlet pipe (3). The air inlet pipe (3) extends coaxially within the water inlet pipe (2) and defines therewith an annular gap (4) for providing an annular water jet. Downstream of the annular gap (4) there is provided a mixing member (6) for mixing water and air. The mixing member (6) includes a water flow disturbing device (7) which is provided to be hit by the annular water jet. At least those parts (2a) of the water inlet pipe (2) and/or those parts (3a) of the air inlet pipe (3) which define the annular gap (4), consist of plastic material. The water flow disturbing device (7) includes at least one helical means (8) which extends along the inner side of the mixing member (6) around through-flow portions (6a) thereof within said helical means (8) such that helical movements are imparted to the annular jet of water when it flows downwards through said through-flow portions (6a).



Published:

— *with international search report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.